CLAIMS

1. A method of desalting raw water with at least a water-soluble salt contained therein, which comprises the following first and second steps:

(1) removing water from said raw water to concentrate said raw water; and

(2) removing at least a part of said water-soluble salt from the resulting concentrated raw water.

2. The method of claim 1, wherein said first step and second step are conducted at the same time.

3. The method of claim 1, wherein said raw water contains at least one kind of alkali metal ions or alkaline earth metal ions.

4. The method of claim 1, wherein said concentrated raw water has a salt concentration in a range of from 10 wt.% to a saturation solubility of said salt.

5. The method of claim 1, wherein said first step is conducted by evaporation and/or by using a reverse osmosis membrane.

6. The method of claim 1, wherein said second step is conducted by using a charge mosaic membrane.

7. The method of claim 2, wherein said first step and second step are conducted at the same time by using a nanofiltration membrane.

8. The method of claim 1, wherein said raw water contains

a value.

9. The method of claim 1, wherein said raw water is seawater or ocean deep water.

10. A method of desalinating ocean deep water, which comprises the following steps:

concentrating said ocean deep water by reduced-pressure evaporation until a concentration of a salt reaches a range of from 10 wt.% to a saturation solubility of said salt;

desalting the resulting concentrated ocean deep water through a charge mosaic membrane until said concentration of said salt is lowered to from 0.5 to 12 wt.%;

concentrating the resulting desalted ocean deep water by reduced-pressure evaporation until said concentration of said salt reaches a range of from 10 wt.% to said saturation solubility of said salt; and

desalting the resulting concentrated ocean deep water through a charge mosaic membrane until said concentration of said salt is lowered to from 0.1 to 1.0 wt.%.

11. A method of desalinating ocean deep water, which comprises the following steps:

concentrating said ocean deep water through a reverse osmosis membrane until a concentration of a salt reaches a range of from 5 to 7 wt.%;

concentrating the resulting concentrated ocean deep water further by reduced-pressure evaporation until said

concentration of said salt reaches a range of from 10 wt.% to said saturation solubility of said salt; and

desalting the resulting concentrated ocean deep water through a charge mosaic membrane until said concentration of said salt is lowered to from 0.1 to 1.0 wt.%.

12. A method of desalinating ocean deep water, which comprises the following steps:

concentrating said ocean deep water through a nanofiltration membrane until its volume is decreased to 1/5 to 1/50; and

desalting the resulting concentrated ocean deep water through a charge mosaic membrane until said concentration of said salt is lowered to from 0.1 to 1.0 wt.%.

13. Desalted water obtained by the method of any one of claims 1-12.

14. A desalting system comprising in combination at least one concentration unit, which is selected from a vacuum evaporator, an atmospheric evaporator, a reverse osmosis membrane unit or a nanofiltration membrane unit, and a charge mosaic membrane desalting unit.

15. The desalting system of claim 14, wherein said vacuum evaporator is selected from a centrifugal-flow thin-film vacuum evaporator, a rotating heat-transfer surface vacuum evaporator, a high-speed spinning vacuum evaporator, a falling-film vacuum evaporator or a wall-scraping vacuum

evaporator.